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IN THE

Supreme Court of the United States

In Re MARIA GONZALEZ, individually and as-mother and legal guardian of her daughters TARA GONZALEZ (age 14) and NICOLE GONZALEZ (age 8),

Petitioner.

ON PETITION FOR WRIT OF MANDAMUS TO THE UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

PETITION FOR WRIT OF MANDAMUS TO THE UNITED STATES COURT OF APPEALS SECOND CIRCUIT, AND HON. JOHN M. WALKER, JR., CHIEF JUDGE, AND HON. JOHN O. NEWMAN, AND HON. SONIA SOTOMAYOR, CIRCUIT JUDGES

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Questions Presented for Review

1. Is the FCC required by Federal law to prepare an Environmental Impact Statement prior to any nationwide licensing of a whole new spectrum of ultra-high radio frequencies for Advanced Wireless Services? (42 U.S.C. § 4331 *et seq.*)

2. Does FCC's release of untested and potentially harmful AWS radio frequencies for unauthorized invasion into private homes without NEPA compliance violate the Third, Fourth and Fifth Amendments?

3. Has the FCC's intransigent refusal to prepare a timely EIS closed off all other opportunities to obtain adequate relief in any other form or court, except by writ of mandamus?

4. Will the issuance of a writ of mandamus to the Second Circuit Court of Appeals aid the appellate jurisdiction of the Circuit and Supreme Courts to review the FCC's final RF Safety regulations for AWS frequencies?

5. Do exceptional circumstances exist to warrant the exercise of the Supreme Court's discretionary powers?

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OPINION AND ORDER OF COURT OF APPEALS

The opinion and order of the court of Appeals, filed on June 7, 2006, is unreported. The full text is set forth in the Appendix at A – 1.

JURISDICTION

This Court's jurisdiction is founded on the All Writs Statute, 28 U.S.C. § 1651 and the common law. The Court of Appeals' jurisdiction is founded on 28 U.S.C §§ 1651 and 2342 and on 42 U.S.C. § 402(a). Petitioner resides in the Second Circuit.

PRELIMINARY STATEMENT

This proceeding primarily concerns protection of infants and school children from potential long-term biological harm caused by daily exposure to wireless ultra-high frequency radiation emitted from transmission facilities erected near schools, playgrounds and family homes. The FCC has repeatedly refused to consider the reasons for widespread public concern over this issue or to investigate its scientific validity. The Commission is now poised to issue 1,122 new licenses to commercial telecommunication companies to increase wireless transmissions to cover "Advanced Wireless Services" throughout the United States, covering multiple spectrum of new ultra-high frequencies. The FCC has failed and refused to prepare any EIS covering this major new federal agency action. Petitioner Maria Gonzalez sought a writ of mandamus from the Court of Appeals to require the FCC to prepare such an EIS, but her petition was summarily denied in less than 24 hours in a one-paragraph decision, a copy of which is set forth in the Appendix (A-1).

STATEMENT OF FACTS

1. Petitioner Maria Gonzalez is a critical care nurse working in the Emergency Room of a major hospital in New York City. She resides at 22-20 23rd Street in Astoria, Queens. She is the mother of two daughters, Tara Gonzalez, age 14, and Nicole Gonzalez, age 8, both of whom attend Public School 122 in Astoria, Queens. In the Fall of 2004, Nextel Communications, Inc. installed several wireless transmission antennas on top of a four-story building directly across the street from P.S. 122. Nextel's installers falsely informed inquirers that the antennas were "solar panels." These antennas transmit cell phone signals continuously into the classrooms of P.S. 122 and nearby residences. Nextel has recently started concealing antennas located near schools in Queens by installing thin fiberglass panels in front of the antennas, painted to look like brick walls.

2. On September 9, 2004, the FCC announced its designation of a new wide spectrum of frequencies for use in Advanced Wireless Services, potentially including third generation (3G) services [the more complex digital super-high-speed, larger capacity transmissions which have already been shown in European studies to cause biological effects in human beings]. The FCC's Notice of Proposed Rule Making (designated FCC 04-218) is available on the Commission's website, www.fcc.gov [by typing in 04-218 in the "Search" box].

3. For purposes of this proceeding, the most significant section of the FCC's Notice of Proposed Rule Making appears at the top of page 44 of 04-218, entitled "RF Safety." The safety standards proposed by the Commission for Advanced Wireless Services relate back to the FCC's existing safety standards, based solely on twenty-year-old data on the *physical* impact of

electromagnetic energy levels emitted by transmitters – the level at which the electromagnetic energy is high enough to *heat* human flesh. [The so-called "thermal" effect, analogous to microwave oven technology.] These FCC standards do not take into account *any* possible biological effects, such as a breakdown of cell structures or DNA strands, or systemic reactions such as headaches, fatigue or sleep disorders (all of which have been observed by both U.S. and foreign researchers).

4. The "RF Safety" section concludes with an invitation for public comment. A number of Comments were filed with the FCC in response to its invitation from advocacy organizations and individuals – including Petitioner – expressing concern about the FCC's failure to investigate or even consider any possible harmful biological effects from the radio-frequency radiation it planned to turn loose on the American public. One such Comment was filed by the EMR Policy Institute [EMRPI], based in Vermont, one of the most active and responsible citizen advocacy groups concerned about the effects of radio frequency radiation (RFR). The EMRPI Comment stated in part:

> We oppose the FCC's adoption of the proposed rules as superficial, arbitrary and capricious, and we urge the FCC to initiate or request thorough and comprehensive research and study of the rule's impact on human health using a biological approach including *all* six factors that operate in combination in high frequency transmissions to affect environmental exposure to RF radiation:
>
> 1. Frequencies that are resonant in human cells.
> 2. The effect of modulation of those frequencies on human cells.

> 3. The impact of different lengths of time of exposure.
> 4. Cumulative effects of repeated or continuous exposure.
> 5. Individual variation in susceptibility in population subgroups to RF radiation exposure.
> 6. The impact of different levels of radiated power (ERP) for the foregoing modulated frequencies.

The Comment went on to discuss the FCC's legal duty to prepare an Environmental Impact Statement (EIS) for the new rule under NEPA. It then cited recent scientific studies in Sweden, Holland and Austria – all of which support the need for a fresh look at the potential harmful environmental effects of the new higher frequency RF radiation.

5. On January 24, 2005, Petitioner herself filed a Comment in reply to the Comment filed by Nextel Communications, in which she described her fight with Nextel over the placement of transmitters across the street from her daughters' school at P.S. 122. Petitioner stressed the potential irreversible harm to children from such installations near schools.

> Our children will be subjected to this exposure for 8 hours a day, 5 days a week for many years. Nextel insists the antennas are safe yet can offer no definitive proof. They base their claims on studies which are outdated and which have been funded by the industry itself. Many other studies, especially from abroad, are raising valid and serious issues and concerns about the long-term health effects of these antennas. Clearly there is doubt here. In such a

situation, and especially where it involves children, the obvious thing to do would be to exercise caution.

These antennas should never have been placed near the school and they should now be immediately removed. Serious studies need to be undertaken to determine the effects of these towers on human health. These studies will take time and it is totally unacceptable for anyone to think that we will allow our children to be guinea pigs in the interim. Obviously if 5 or 10 years from now it is determined that there is a safety issue it will be too late for the children who have been exposed for all that time.

6. No Environmental Impact Study relating to Advanced Wireless Service transmission frequencies has ever been issued by the FCC in compliance with NEP The citizens, scholars, and responsible organizations who conscientiously responded to the FCC's request for Comments to its Notice of Proposed Rule Making were wholly disregarded. Their Comments were all brushed aside.

7. On April 12, 2006, the FCC announced finalized plans to proceed with the auction of the first stage of its new spectrum for Advanced Wireless Services. The auction was originally scheduled to begin on June 29, 2006, and currently is scheduled for August 9, 2006, when a total of 1,122 Advance Wireless Services licenses will be auctioned off for the new spectrum of ultra-high frequencies. The individual market areas for which licenses will be issued by the FCC cover the entire United States. The total dollar amount of "Upfront Payments" to be eligible to bid on these 1,122 licenses is $1,167,037,500. By any reasonable yardstick, this is a "major" Federal

action "significantly affecting the quality of the human environment."

8. On May 5, 2006, Petitioner filed a petition for writ of mandamus in the United States Court of Appeals for the Second Circuit. The Petition sought a Writ of Mandamus directing the Federal Communications Commission to prepare and issue an Environmental Impact Statement in advance of the FCC's auction of licenses for telecommunications companies to operate the new broad range of additional spectrum of ultra-high radio frequencies for "Advanced Wireless Services" in hundreds of market areas throughout the United States. The petition pointed out that the FCC has failed and refused to conduct, request or initiate any scientific research into the biological effects on human health of the operation of the frequencies it intends to license. Petitioner argued that the FCC had violated mandatory provisions of the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. §§ 4331 *et seq.*, and that the agency's duty to file an EIS is non-discretionary. The Petition also sought a preliminary and permanent injunction to prohibit the Commission from issuing or continuing any licenses pursuant to such auction until an EIS is prepared by the FCC in conformity with NEPA. Petitioner asserted that she had no speedy, adequate remedy at law, and had exhausted all administrative remedies available to her.

9. The petition was argued before the Court of Appeals on June 6, 2006, and on June 7 the Court issued a unanimous opinion holding:

> Upon due consideration, it is ORDERED that the petition is DENIED because Petitioner has failed to demonstrate that she has no adequate remedy at law or that she has exhausted her administrative remedies. To the extent that the petition can be construed as an action directly under the Administrative Procedures Act and the National

Environmental Policy Act, Petitioner has failed to clearly identify the final rule that she seeks to challenge or establish that the FCC has a mandatory duty to prepare an EIS as part of the challenged rulemaking.

WHY MANDAMUS SHOULD BE GRANTED

A. The Federal Communications Commission is About to Launch a Broad New Spectrum of Untested Ultra-High Frequency Radio Transmissions on the Civilian Population of the United States Without Complying with the Mandatory Minimum Statutory Requirements of the National Environmental Policy Act

Scientific research studies in a number of countries have produced credible evidence of potential long-term biological health effects from prolonged exposure to high frequency wireless signals from transmitters located close to the study subjects. These studies have raised serious concerns among teachers and parents like Maria Gonzalez about the potential harm to young students from transmitters located near schools and homes.

The striking fact about these studies is that they have been based on transmissions well within the effective radiated power levels permitted under the FCC's present safety standards.

Published studies conducted in France (2003), Spain (2003) and Austria (2006) all show the occurrence of headaches and sleep disturbances in subjects residing close to transmission antennas.

A 2004 study in Sweden concluded that high frequency transmissions break down the natural repair mechanisms in human skin, leading to increased rates of malignant skin cancer from sun damage.

A recent study by researchers in Spain found a sharp drop in fertility among white storks nesting within 200 meters of cell transmission towers, with evidence of total infertility after five years.

[The full texts of these studies are available on the EMR Policy Institute website at:

www.emrpolicy.org/resources/studies/index/htm]

In 2003, the noted European academic and scientific publisher, Springer Verlag, issued a compilation of studies on *Biological Effects of Electromagnetic Fields: Mechanisms, Modeling, Biological Effects, Therapeutic Effects, International Standards, Exposure Criteria. Peter Stavroulakis (Ed.).* The chapter entitled "5.4 Effects of Electromagnetic Fields on the Immune System," authored by Handan Tuncel, Istanbul University of Cerrahpasa Medical Faculty, Biophysics Department, Istanbul, Turkey, states(at p. 522, 524):

> Substances that damage cellular genetic material, such as DNA and chromosomes, are called "genotoxic." Genotoxic substances cause cancer, reproductive health effects and neurological damage.***
>
> There is more than sufficient evidence of chromosome aberration, DNA strand breakage, altered oncogene activity, and neoplastic transformations of cells to conclude that EMR across the spectrum from ELF to RF/MW is genotoxic. This is independently confirmed by the established biological mechanism of calcium ion efflux and melatonin reduction.

The FCC has taken the position that its present safety standards – based solely on thermal effects – provide adequate protection for all humans, and that none of the

scientific research that shows otherwise provides "compelling evidence" that radio frequency radiation may be biologically harmful. The FCC has flatly refused to conduct or initiate any research into such non-thermal biological effects. See *EMR v. FCC*, 391 F.3d 269 (CADC, 2004).

The FCC's obdurate position and buck-passing does not excuse the agency from its non-discretionary duty to prepare an EIS when the Commission initiates a major new Federal action such as the pending nationwide deployment of a broad new spectrum of frequencies for Advanced Wireless Services. This major new action requires the FCC to comply with NEPA by filing a new comprehensive environmental impact statement. Under the CEQ criteria set forth in 40 C.F.R. § 1508.27 (see page A-11), the nationwide use of the new spectrum will "significantly" affect the quality of the human environment, and requires the preparation of an EIS because:

1. The FCC action will affect *society as a whole* – indeed that is its express goal and objective.

2. The FCC action will have impacts that are *both beneficial and adverse*.

3. The FCC action will directly affect *public health* if the findings of the existing studies are confirmed.

4. The FCC action will particularly impact on *school children*, since expanded use of Advanced Wireless Services in schools is one of the FCC's primary objectives.

5. The effects of Advanced Wireless Services on the quality of the human environment are likely to be *highly controversial*, as popular desire for the

convenience of wireless electronic devices competes with parents' desire to protect their children from potentially cancer-causing emissions and other severe health risks.

6. The effects of the FCC's action on the human environment are *highly uncertain* and involve *unknown risks*.

7. A principal characteristic of Radio Frequency Radiation is that its potential harm lies in *cumulatively significant impact* from years of exposure to wireless emissions.

8. FCC's current licensing program is the precursor for *future actions* licensing even higher frequencies for wireless services.

9. In addition to human health risks, increasing numbers of studies have shown that emissions from wireless transmission towers threaten *habitats* for nesting birds, amphibia, plants and wildlife, causing a decline in offspring – these effects are indiscriminate and adversely affect *endangered and threatened species* equally.

Taken together, these factors overwhelmingly establish that the FCC's action *significantly* affects the quality of the human environment, obligating the FCC to comply with the mandatory NEPA requirement to prepare an Environmental Impact Statement.

The "Resonance Phenomenon" at Higher Frequencies

The FCC's launching of higher frequencies for Advance Wireless Services raises new questions of health

effects as a result of the *Resonance Phenomenon*. Resonance is a well-established physical effect in biological tissue. In strict physics terms, resonance is what occurs when some aspect of a force, such as a frequency wave, matches some characteristic of an object, such as the human anatomy. When there is a resonant "match" the power inherent in the wavelength is maximally transferred to the object, causing it to vibrate or resonate. One dramatic example of a resonant match is when an opera singer hits the high-C note in the presence of a crystal goblet, causing it to resonate and shatter. Radio waves differ in length. So do physical objects. Human and all other species have individual resonant matches. The current thermal standards at the FCC recognize the "average" human anatomy at approximately 6 feet tall. At 6-feet, that is a perfect whole-body resonant match between 30-300 MHz. That specifically includes the FM radio bands as well as others. It is because of resonance matching that the FCC standards are more stringent in those areas. But the FCC only takes whole-body resonance into consideration in their standards. Individual organs have their own resonance models. Human brain tissue, for example, reaches peak absorption in the ultra-high frequency ranges, right where all of the new cellular telephone functions and where the new licenses are proposed for auction. Yet, no specific standard exists at the FCC for ambient exposure for individual organs.

Children have thinner skulls. Radiation therefore is absorbed more efficiently by them. Yet the standards model in place is only for males at an average height of 6-feet. Downward extrapolations are made to include other members of the population but they are theoretical at best. As with humans, so with other species. Fruit flies and some other insects, for example, are whole-body resonant with the microwave bands which are also part of the new spectrum auctions. History teaches us that major

disruptions in any part of the ecological chain affects all others. Resonance is a well-known dynamic in the biophysics research community.

When Marconi made the first successful Transatlantic radio broadcast in 1903 from the U.S. to the UK, the radio frequency he used was in the extremely low frequency range on the electromagnetic spectrum with each wave measuring approximately 8,000 meters (5 miles) in length. The advent of FM broadcasting in the 1960's reduced the operating wavelength to 118 inches long. Today, cell phone technology operates between 900 MHz and 2 GHz, using radio waves about 13.2 inches long and less. For the initial phase of new Advanced Wireless Services, the FCC plans to license radio waves that are between 6.75 inches (1710 MHz) and 5.5 inches (1755 MHz) in length.

The significance of these shorter radio wave lengths (and those to come) lies in the Resonance Phenomenon described above. In addition, another well-known biophysics principle that can result from resonance is the creation of standing energy "hotspots." For example, human brain tissue can experience RF hotspots from ultra-high frequency radiation because the skull is a "chamber" that does not dissipate energy the same way that the rest of the body will. Given a chamber (or object) whose dimension equals a multiple or one-half fraction of a radio wave length, the chamber or object will *resonate* at that radio frequency. The intensity of the particular radio waves will increase as they "bounce" back and forth inside the chamber.

This can be easily understood with sound waves, which operate much the same way. A tuning fork vibrates intensely as it is struck and emits a sound wave equal to its length, for instance.

It is reasonable to assume that a resonator chamber such as a baby's skull, other human organs, and small

living creatures – in particular frogs and birds which are particularly vulnerable to constant exposure to these specific frequency bands – will suffer standing wave hotspots from the proposed AWS range of frequencies to be auctioned by the FCC. The full effects are presently unknown but can easily be imagined – brain damage, embryo damage, organ damage. Frog eggs, for instance, are known to die from microwave exposure. Water is a conductive medium. Yet none of this biological understanding is factored into the current FCC regulation. A full EIS would reveal a range of interdisciplinary knowledge. That is why Federally-funded research is so important, and why preparation of an EIS by the lead agency is critical. A writ of mandamus issued by the Court of Appeals under direction from this Court would produce this research.

B. Practical Considerations Support FCC's Obligation to Comply With NEPA

One major difference between the FCC's preparing an EIS and an outside group of citizens bringing an independent proceeding to challenge existing safety rules (as in *Cellular Phone Taskforce v. FCC*, 205 F.3d 82 (2d Cir., 2000)) is *burden of proof.* When a citizen advocacy group challenges the adequacy of the FCC safety rules, the citizen group must present convincing proof that the FCC rules are inadequate. Since such groups of citizens usually have no significant financial resources to conduct their own research, their ability to overcome the FCC's array of resources, presumptions and experts is limited. By contrast, when the FCC itself must establish compliance of its safety rules with the requirements of NEPA in an Environmental Impact Statement the burden of proof shifts to the Commission to bring forward substantial evidence to support its rules. That is a major difference between this

case and the Second Circuit's earlier decision in *Cellular Taskforce* and the DC Circuit's decision in *EMR v. FCC.*

The practical consequences of filing an Environmental Impact Statement are self-evident. An EIS must necessarily consider and evaluate the evidence of environmental harm identified in the various foreign studies. Where that evidence is not clear and convincing, the FCC will be obligated to seek further research to resolve uncertainties. This will presumably result in Federally-funded research updating the data and criteria used to formulate FCC safety regulations and to provide the protections that citizens like Petitioner and other parents are seeking for their children.

New safety standards resulting from a carefully researched EIS might conceivably include towerless buffer zones around schools and playgrounds; use of underground coaxial cables or existing telephone lines to deliver advanced electronics to classroom; development of shielding materials to prevent unwanted signals from entering homes and school buildings; and/or directional transmissions (like "no-fly zones"). There are many other alternatives to avoid exposing young children to full-blast continuous wireless transmissions that can be explored by technically sophisticated researchers and consultants.

Given the billions of dollars of new licensing revenues anticipated from Advanced Wireless Services, it is difficult to fathom the unwillingness of this Federal agency to spend a reasonable sum to conduct adequate research to protect the American people from an apparently significant risk of harm.

C. Important Constitutional Issues Are Raised By FCC's Refusal to Comply with NEPA

High frequency wireless transmissions are able to invade virtually every home in America. Few conventional

construction materials can prevent this unauthorized entry. Transmissions bring potential harm to the occupants of these private homes and can seize and destroy their good health and safety. This agency-authorized illegal entry will violate the Fourth Amendment unless the government (FCC) first complies with the law enacted by Congress to protect citizens from harm. Involuntary constant exposure to potentially harmful transmission waves inside the home is not acceptable.

Likewise, the taking of private property by rendering homes located near FCC transmission facilities unhealthful and even uninhabitable constitutes a taking of property without due process of law in violation of the Fifth Amendment.

Congress declared that its goal in establishing a national wireless communications service was "for the purpose of national defense" (47 U.S.C. § 151). When the FCC permits the entry of advanced wireless signals into people's homes for national defense purposes – for example: military recruiting; soldier training; national guard directives; third-party emails from servicemen and women in war zones; military supply requisitions and purchases – without first complying with the human health protections mandated by NEPA, it also violates the Third Amendment.

Under these Constitutional Amendments, the right of the people to be safe in their persons, houses, papers and effects from being bombarded by unauthorized potentially harmful high frequency radiation is absolute. If the American people are to be subjected to high frequency signals at government direction, it must be under the protection of the law, with due process and the statutory protections set up under NEPA. The People have a right to be safe and secure in their bodies and inside their homes even in an electronic age.

D. Because of the FCC's Intransigence There is No Longer Any Adequate Alternative Remedy Available in Any Other Form or From Any Other Court

In 2000, the FCC convinced the Second Circuit Court of Appeals that the agency had a mechanism in place to keep abreast of significant new scientific developments:

> Furthermore, the FCC satisfied itself that there was a mechanism in place for accommodating changes in scientific knowledge.

Cellular Phone Taskforce v. FCC, 205 F.3d 82, 90 (2000).

The FCC also convinced the Court of Appeals that it had the ability to perform "functional compliance" with the EIS requirements of NEPA:

> The procedures followed by the FCC in the instant rulemaking satisfy the functional compliance test. In considering the environmental impact of its guidelines, the FCC "consulted with and obtained the comments of any Federal agency which has jurisdiction by law or special expertise with respect to [the] environmental impact involved." 42 U.S.C. § 4332. *Id.* at 94.

However, when a citizens group subsequently called the FCC's attention to expressions of concern by the "Federal Radio-Frequencies Interagency Work Group" over the adequacy of the FCC's existing safety standards, the FCC rejected their petition on highly technical procedural grounds and convinced the Court of Appeals for the District of Columbia that the agency was nonetheless sincerely committed to honoring its commitments to the Second Circuit, as well as its NEPA responsibilities. Said the Court:

> Finally, the Commission's determination to keep an eye on developments in other expert agencies suggests that here, as in *Cellular Phone Taskforce*, the Commission has an adequate "mechanism in place for accommodating changes in scientific knowledge." 205 F.3d at 91.

EMR Network v. FCC, 391 F.3d 269, at 273(CADC, 2004) (*cert. den.* 1255 S.Ct 2925 (2005).

Now that the FCC is about to unleash an entirely new group of untested ultra-high frequencies on the American people, the FCC has effectively repudiated all of its prior commitments and assurances to the Second Circuit and DC Circuit Courts, and is going ahead full-speed with the issuance of more than a thousand licenses to blanket the United States with Advanced Wireless Services, with *no* review by the RF Inter-Agency Work Group, *no* functional compliance with NEPA, and *no* NEPA Environmental Impact Statement.

What was the Court of Appeal's response to all this below? To find a quick and easy excuse for not exercising its authority:

> ...Petitioner has failed to demonstrate that she has no adequate remedy at law or that she has exhausted her administrative remedies.
>
> (Appendix, page A - 1)

E. <u>There Are No Adequate Alternative Remedies</u>

What conceivable adequate remedies remain to challenge the immediately impending licensing of frequencies for Advanced Wireless Services, presently scheduled for the immediate future?

The FCC suggested to the Court of Appeals during oral argument below that one alternative remedy was for Petitioner to challenge the new licenses as they are issued, by filing Petitions for Review before the District of Columbia Court of Appeals. Picture the realities of that suggestion – a working nurse raising two young children finding the monetary and professional resources to file 1,122 Petitions for Review of licenses worth many billions of dollars in a distant Courthouse, and then facing the scores of well-funded opposition attorneys for telecommunications industry licensees and their various scorched-earth strategies to defeat her.

The FCC also told the Court of Appeals that a second alternative remedy available to Petitioner was to file an administrative "Petition for Inquiry" before the FCC itself – as had previously been done with absolutely no success in *EMR v. FCC*, *supra*, -- a fruitless endeavor protracted over three years – only to be denied.

The Court of Appeals was wrong to adopt these cynical suggestions as grounds for denying a writ of mandamus and asserting Petitioner's failure to demonstrate that she had no adequate remedy at law or that she had exhausted her administrative remedies. The situation speaks for itself – if NEPA is to be enforced in a timely and effective manner, it must be done *now* by an independent judiciary conscious of its responsibility to the American public and the Constitution of the United States.

The Second Circuit Court of Appeals earlier ruled in *Cellular Phone Taskforce v. FCC*, 205 F.3d 82 at 94 (2002):

> Both the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321 et seq., and regulations promulgated thereunder by the Council on Environmental Quality ("CEQ"), generally require agencies subject to NEPA *that are about to commit resources in a federally significant action,*

> including rulemaking, *to consider the environmental effects of their actions* by preparing either an Environmental Impact Statement ("EIS"), or an Environmental Assessment ("EA") followed by a finding of no significant impact ("FONSI") or an EIS as appropriate. (Emphasis added.)

The only remedy now remaining for obtaining FCC compliance with NEPA is through an extraordinary writ. If the agency had prepared an EIS back in 2004 when it was urged by many commenters there would have been ample time to do so. The agency itself is responsible for forcing the Court to exercise its discretionary powers.

F. Additional Errors Committed by the Court of Appeals

A secondary set of reasons stated by the Court of Appeals for denying mandamus was:

> ...Petitioner has failed [1] to clearly identify the final rule that she seeks to challenge or [2] establish that the FCC has a mandatory duty to prepare an EIS as part of the challenged rulemaking. (A - 2)

Both statements are refuted by the written record and are apparent judicial oversights produced by the rush to judgment below.

1. Preservation of Appellate Jurisdiction

Petitioner's *Reply* to the FCC's opposition papers in the Second Circuit Court of Appeals *explicitly identified the order* that will form the basis for a future appeal on the merits from the FCC's order (at pp. 9-10):

The FCC argues that "Petitioners have failed to identify any relevant order over which the Court would have jurisdiction in the future that would justify present action under the All Writs Act." (Opp., p. 13) Once again, Respondents are wrong. The "relevant order" over which the Court has putative jurisdiction is the order setting RF safety standards, specifically identified in par. 9 of the Petition (at pages 5-6):

> 9. For purposes of this proceeding, the most significant section of the FCC's Notice of Proposed Rule Making appears at the top of page 44 of 04-218, entitled "RF Safety." This page is attached hereto as Exhibit "E". The key section is marked. It is to be noted that the safety standards proposed by the Commission relate back to the FCC's earlier standards (which in turn relate back to data that is over twenty years old). The FCC's existing safety standards are based solely on the *physical* impact of electrical energy levels emitted by transmitters – the level at which the electrical energy is high enough to *heat* human flesh. [The so-called "thermal" effect, analogous to microwave oven technology.] These FCC standards do not take into account *any* possible biological effects, such as a breakdown of cell structures or DNA strands, or systemic reactions such as headaches, fatigue or sleep disorders (all of which have been observed by foreign researchers).

It is *this* FCC order setting RF Safety rules that is the direct basis for the requested EIS. If the FCC's

> EIS likewise fails to address biological issues, it will presumably become the subject of further litigation.

During oral argument, in response to a question from Judge Newman, counsel for Petitioner once again identified this very same provision, covering "RF Safety," as the FCC ruling that would form the basis for a future appeal when a final order implementing the provision is entered. [The parties were only allowed ten minutes for argument, and it is possible the Court did not hear or comprehend the answer. However, it is clearly stated in the tape recording of the argument and corresponds exactly with Petitioner's Reply papers.]

This Court ruled in *McClellan v. Carland*, 217 U.S. 268 (1910) that writs might issue in aid of appellate jurisdiction yet to be argued, *even though there was not yet a final order in the court below.*

> [W]e think it the true rule that where a case is within the appellate jurisdiction of the higher court, a writ of mandamus may issue in aid of the appellate jurisdiction which might otherwise be defeated by the unauthorized action of the court below. This rule was distinctly stated and the previous cases referred to in *Knickerbocker Ins. Co. v. Comstock*, 16 Wall. 258, 270, 21 L. ed. 493, 498. In that case the rule was recognized that this court had the power to issue the writ of mandamus to compel the circuit courts to proceed to final judgment in order that this court may exercise the jurisdiction of review given by law. In that case the court said:
>
> > 'Repeated decisions of this court have established the rule that this court has power to issue a mandamus, in the exercise of its

> appellate jurisdiction, and that the writ will lie in a proper case to direct a subordinate Federal court to decide a pending cause.'

In *Federal Trade Commission v. Dean Foods Company*, 384 U.S. 670 (1966) this principle was extended to potential future jurisdiction over decisions *by an administrative agency* (in that case the FTC) over which the Court had appellate jurisdiction to review final orders – even though no final order had yet been made. Such is the case here.

The principle at work here is the power of the Federal appellate court – the Second Circuit Court of Appeals – to issue a writ of mandamus to compel the FCC to exercise its authority when it is its duty to do so, leading to a final agency order on RF Safety to which Petitioner can file a Petition for Review on the merits. That duty here is to file an EIS, supplying the factual record for Appellate review of the agency's safety standards for AWS transmissions.

This is a proper function under the All Writs Statute, as explained in this Court's decision in *Roche v. Evaporated Milk Assn*, 319 U.S. 21, 26 (1943):

> The traditional use of the writ in aid of appellate jurisdiction both at common law and in the federal courts has been to confine an inferior court to a lawful exercise of its prescribed jurisdiction or *to compel it to exercise its authority when it is its duty to do so*. (Emphasis added.)

2. FCC Has a Mandatory Duty to Prepare an EIS

The FCC has never disputed that its safety regulations were subject to NEPA. Chief Judge Walker, who presided below, himself acknowledged that the FCC's original safety regulations for wireless transmissions were

adopted *in order to meet NEPA requirements*. This is stated in the very opening paragraph of his prior opinion in *Cellular Phone Taskforce v. FCC*, 205 F.3d 82, 87 (2000):

> In 1985, after seeking consensus among participating experts and after public notice and comment, the FCC adopted guidelines for human exposure to RF radiation from FCC-regulated transmitters and facilities. *The guidelines were required by the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321 et seq., and the Council on Environmental Quality ("CEQ") regulations promulgated thereunder, see 40 C.F.R. §§ 1500.1 et seq.* (Emphasis added.)

That left the only remaining question before the Court of Appeals on Petitioner's application below whether the proposed auction of 1,122 licenses to blanket the U.S. with Advanced Wireless Services was a "major federal action".

In its opposition papers before the Court of Appeals, the FCC conceded "The National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 et seq., requires federal agencies to examine the environmental effects of their actions." (p. 5) The FCC did not conceal the fact that in economic terms alone their current initiative is a major federal action:

> The Congressional Budget Office has estimated the value of the 1710-1755/21110-2155 MHz spectrum to be *approximately $15 billion* and a Committee of the House of Representatives has estimated the value to be *as much as $34 billion*. (Emphasis added.) [*Ibid.*]

As we have noted above (at p. 16-17), the pending FCC action, particularly in the context of ongoing research into biological effects from wireless transmissions around the world, involves "significant" environmental effects

under the CEQ's regulations. There can be no serious doubt that the FCC is obligated to comply with NEPA before the agency proceeds with issuing new licenses for AWS frequencies. The Court of Appeals was mistaken.

G. Exceptional Circumstances Warrant the Exercise of the Court's Discretionary Powers

A principal goal of the National Environmental Policy Act is to:

> assure for all Americans safe, healthful, productive and esthetically and culturally pleasing surroundings. 42 U.S.C. § 4331(b)(2)

The FCC is about to jeopardize these individual rights by blanketing the nation with untested ultra-high frequencies whose potential for biological harm, especially to young children in their formative years, the agency refuses to consider or examine. Failure of the agency to study and report on the potential environmental impact of these new frequencies on humans is an act of defiance that can only be stopped by the Court directing the Court of Appeals to issue a writ of mandamus to the FCC ordering it to prepare an EIS in compliance with the law.

Time is now of the essence.

This Petitioner-mother has no place else to turn for help. The words of Chief Justice Marshall in this Court's first mandamus case, *Marbury v. Madison*, 5 U.S. 137 (1803), must be heeded:

> The very essence of civil liberty certainly consists in the right of every individual to claim the protection of the laws, whenever he receives an injury. One of the first duties of government is to afford that protection.***

> The government of the United States has been emphatically termed a government of laws, and not of men. It will certainly cease to deserve this high appellation, if the laws furnish no remedy for the violation of a vested right. *Id.*, at p. 163

Unless the FCC completes a responsive and responsible EIS *before* permitting the general use of the new AWS frequencies, any potential harm to human health will start to occur and may never be corrected. In the words of Maria Gonzalez in her Comment to the FCC opposing the proposed RF Safety standards:

> Serious studies need to be undertaken to determine the effects of these towers on human health. These studies will take time and it is totally unacceptable for anyone to think that we will allow our children to be guinea pigs in the interim. Obviously if 5 or 10 years from now it is determined that there is a safety issue it will be too late for the children who have been exposed for all that time.

Chief Justice Marshall left no doubt that a Presidential appointee is subject to mandamus where – as with the Members of the FCC here – he refuses to comply with the law.

> But when the Legislature proceeds to impose on that officer other duties; when he is directed peremptorily to perform certain acts; when the rights of individuals are dependent on the performance of those acts; he is so far the officer of the law, is amenable to the laws for his conduct, and cannot at his discretion sport away the vested rights of others.

> The conclusion from this reasoning is that, where the heads of departments are the political or confidential agents of the executive, merely to execute the will of the President, or rather to act in cases in which the eecutive possesses a constitutional or legal discretion, nothing can be more perfectly clear than that their acts are only politically examinable. But where a specific duty is assigned by law, and individual rights depend upon the performance of that duty, it seems equally clear that the individual who considers himself injured, has a right to resort to the laws of his country for a remedy.
>
> *Marbury v. Madison*, 5 U.S. 137, 166 (1803).

The Chief Justice noted that the duty of a Court to use its discretionary powers to issue a writ of mandamus in matters of public concern goes back to the early English cases.

> Lord Mansfield, in 3 Burrows, 1266, in the case of *The King v. Baker et al*, states with much precision and explicitness the cases in which this writ may be issued.
>
> "Whenever," says that very able judge, "there is a right to execute an office, perform a service, or exercise a franchise (more especially if it be in a matter of public concern, or attended with profit), and a person is kept out of possession, or dispossessed of such right, and has no other specific legal remedy, this court ought to assist by mandamus, upon reasons of justice, as the writ expresses, and upon reasons of public policy, to preserve peace, order and good government."

> In the same case, he says, "this writ ought to be used upon all occasions where the law has established no specific remedy, and where in justice and good government there ought to be one."
>
> In addition to the authorities now particularly cited, many others were relied on at the bar which show how far the practice has conformed to the general doctrines that have been just quoted.
>
> This writ, if awarded, would be directed to an officer of government, and its mandate to him would be, to use the words of Blackstone, "to do a particular thing therein specified, which appertains to his office and duty and which the Court has previously determined, or at least supposes, to be consonant to right and justice."
>
> *Id.*, at 168-169.

Congress has recognized the right of Americans to "enjoy a healthful environment" and has imposed a duty on the FCC and other Federal agencies to include in every report on major Federal actions "a detailed statement by the responsible official on the environmental impact of the proposed action." (41 U.S.C. §§ 4331, 4332)

In Marshall's words:

> Is it to be contended that where the law in precise terms, directs the performance of an act, in which an individual is interested, the law is incapable of securing obedience to its mandate? Is it on account of the character of the person against whom the complaint is made? Is it to be contended that the heads of departments are not amenable to the laws of their country?

> Whatever the practice on particular occasions may be, the theory of this principle will certainly never be maintained. No act of the legislature confers so extraordinary a privilege, nor can it derive countenance from the doctrines of the common law.
>
> *Id.*, at 164

CONCLUSION

Petitioner requests the United States Supreme Court to issue a writ of mandamus to the Court of Appeals for the Second Circuit to direct the FCC to prepare and file an Environmental Impact Statement pursuant to the National Environmental Protection Act, 42 U.S.C. § 4332(c), addressing issues of human health, before authorizing any licensee to commence operations at frequencies designated for Advanced Wireless Services. Because of the FCC's failure to file a timely EIS before committing resources to this significant new action, there is no longer any alternative remedy available to Petitioner and no other court where this relief is available. The writ is necessary to preserve this Court's appellate jurisdiction over the FCC's proposed RF Safety regulations for AWS transmissions.

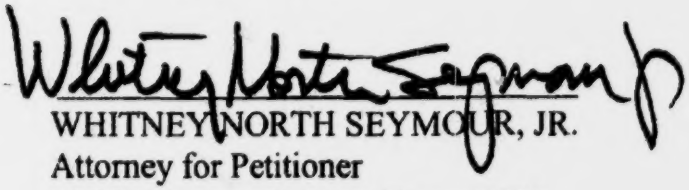
Petitioner further requests that if the Court denies Petitioner's request for a writ of mandamus that this Petition be treated as a Petition for Certiorari.

The continuing validity and effectiveness of the National Environmental Policy Act is at stake in this proceeding, where the FCC has obstinately refused to obey its clear mandate. The Court is reminded of the caution of James Madison in Federalist Paper No. 51:

> If angels were to govern men, neither external nor internal controuls on government would be

necessary. In framing a government which is to be administered by men over men, the great difficulty lies in this: You must first enable the government to controul the governed; and in the next place, oblige it to controul itself.

Respectfully submitted,



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APPENDIX

APPENDIX

Decision by Court of Appeals denying petition for mandamus to require FCC to file EIS, filed June 7, 2006. A – 1

Comment by Petitioner Maria Gonzalez with the FCC in January, 2005, complaining of transmission antennas placed near her children's' school. (Exhibit I to Petition below). A – 3

Constitutional Provisions, Statutes and Regulations involved in the case. A – 8

United States Court of Appeals
for the
Second Circuit

At a stated Term of the United States Court of Appeals for the Second Circuit, held at the Thurgood Marshall United States Courthouse, at Foley Square, in the City of New York, on the 7th day of June, two thousand and six,

Present:

Hon. John M. Walker, Jr.,
Chief Judge
Hon. Jon O. Neman,
Hon. Sonia Sotomayor,
Circuit Judges

Maria Gonzalez, individually and as mother and legal guardian of her daughters, Tara Gonzalez and Nicole Gonzalez,

Petitioner,

v. 06-2139-op

Kevin J. Martin, et al.,

Respondents.

Petitioner, through counsel, petitions for a writ of mandamus requiring the Federal Communications Commission ("FCC") to complete an environmental impact statement ("EIS"). Upon due consideration, it is ORDERED that the petition is DENIED because Petitioner has failed to demonstrate that she has no adequate remedy at law or that she has exhausted her administrative

remedies. To the extent that the petition can be construed as an action directly under the Administrative Procedure Act and the National Environmental Policy Act, Petitioner has failed to clearly identify the final rule that she seeks to challenge or establish that the FCC has a mandatory duty to prepare an EIS as part of the challenged rulemaking.

FOR THE COURT:
Roseann B. MacKechnie, Clerk

By: /s/ Lucille Carr

WT Docket No. 04-356
WT Docket No. 02-353

To: Office of the Secretary
Federal Communications Commission
Washington, DC 20554

Reply Comment Filed by: Maria Gonzalez
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This statement is submitted in response to the "Comments of Nextel Communications" filed on December 8, 2004, with regard to Federal Communications Commission (FCC) WT Dockets No. 04-356 and No. 02-353. Nextel's comments fail to address the issue of human safety and point only to rules to prevent "harmful interference" between the electronic equipment of competing wireless services providers.

In order to comply with the National Environmental Policy Act (NEPA), FCC must assure that its human RF safety rules "prevent human exposure to potentially unsafe levels of radiofrequency (RF) radiation."

Nextel fails to address that issue with good reason -- direct first-hand experience shows that Nextel's representatives are engaged in misleading the public about the very nature of its electronic equipment installations and in using threats of legal action against property owners to enforce antenna installation contracts when those owners raise questions about safety concerns.

In Great Britain, the UK's Ministry of Health prohibits the placing of wireless transmitters near public schools without advance consent of the parents and teachers after a full technical briefing. Not so in the United States.

The following is a first-hand account of the recent installation of five high frequency wireless transmission antennas directly across the street from PS 122 in Astoria, Queens in New York City, done not only without advance knowledge and consent of the parents and teachers, but with deliberate deception on the part of the telecommunications company as to the nature of the installation. * * *

My name is Maria Gonzalez. I have been a critical care nurse for 24 years, 20 of those as the assistant critical care coordinator for the Surgical Intensive Care Unit and Trauma Center of a major hospital in New York City, St. Vincent's Hospital and Medical Center. I have seen death in many guises and strongly fear what radiation exposure can do to human cells and the horrible diseases that can result.

At some point around the end of October or the beginning of November, 2004, twelve cell phone antennas were installed on the roof of 21-80 21st Street. This building is located directly across the street from our local elementary school P.S. 122, in Astoria, Queens. Of the twelve antennas, five face directly into the school building. I do not recall the actual installation of the antennas themselves, but several neighbors remember seeing a large truck with a crane and this is how I assume the towers got onto the roof.

One day as I was picking up my daughters at school I noticed an unmarked white truck in front of the building and several workers working on some large cables. I crossed the street and asked them what they were doing and what those things were up on the roof. One of

them very clearly and with a bit of annoyance said to me that they were installing "solar panels" and walked away. Other parents also questioned these workers and were told the same thing. The following week my husband was at the school to pick up the kids and he came home with a flyer that was being given to the parents by a gentleman outside the school. The gentleman worked for Councilmember Peter Vallone Jr., and the flyer was to inform us that cell phone antennas had been installed at the location I mentioned above and that once they were turned on they would be beaming RF radiation into our classrooms.

I have two beautiful, healthy daughters, ages 7 and 12. Both attend the school and both sit in classrooms whose windows face directly at the Nextel antennas. I am extremely concerned and frightened for the safety and long-term health of my children. I do not want to see one single child harmed by the actions of Nextel.

Councilmember Vallone has been in contact with the owner of the building. When informed of our concerns, the owner expressed shock and indicated that he wanted no part of anything that could harm children. He is willing to abrogate the contract. Nextel refuses to do the same. I ran into the owner one day and asked him about the antennas and how he could do this with so many children now being placed in harm's way. I sensed genuine concern on his part. He told me that he did not really know what they were putting up there. He did not know that there is radiation being emitted from these antennas. He has indicated that Nextel did not clearly explain to him the entire situation. He also indicated to me, as he did to Councilmember Vallone, that he would like to break the contract and have the antennas removed from his building but that Nextel will not allow it. The building owner has hired an attorney to represent him in this matter.

Our school is a wonderful school, it is a blue ribbon school and considered one of the top schools in the city.

1300 students ranging in ages from [illegible]rough 12 years old attend the school. The administration, faculty and staff number over 100. As a result of my initial involvement and strong opposition I have become the school and parent and community representative in this matter. Nextel came into our community and without any notification or discussion chose to place these antennas irresponsibly, in close proximity to our school.

The building on which these antennas are situated is 3 stories tall. Our school is 5 stories tall. These antennas will beam RF radiation directly into our 4th floor classrooms. Our children will be subjected to this exposure for 8 hours a day, 5 days a week for many years. Nextel insists the antennas are safe yet can offer no definitive proof. They base their claims on studies which are outdated and which have been funded by the industry itself. Many other studies, especially from abroad, are raising valid and serious issues and concerns about the long term health effects of these antennas. Clearly there is doubt here. In such a situation and especially where it involves children the obvious thing to do would be to exercise caution.

These antennas should never have been placed near the school and they should now be immediately removed. Serious studies need to be undertaken to determine the effects of these towers on human health. These studies will take time and it is totally unacceptable for anyone to think that we will allow our children to be guinea pigs in the interim. Obviously if 5 or 10 years from now it is determined that there is a safety issue it will be too late for children who have been exposed for all that time.

We have presented our arguments to Nextel. They claim to be a good corporate citizen yet they continue with

the plan to turn the antennas on in total disregard to the wishes of our community and with no concern for the safety of our children.

They claim to have done everything according to the law. What rights do we as citizens and members of a community have when it comes to the placement of cell phone antennas? Apparently, the Telecommunications Act of 1996 preempts many of the arguments we would make in opposition. New York City has shown no real concern in the proliferation which is now taking place.

First and foremost these antennas must be removed from their close proximity to our children. Then the laws need to be changed and we, as citizens need our rights back.

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January 20, 2005

CONSTITUTIONAL PROVISIONS AND STATUTES INVOLVED IN THE CASE

United States Constitution

Amendment III
No soldier shall, in time of peace be quartered in any house, without the consent of the owner, nor in time of war, but in a manner to be prescribed by law.

Amendment IV
The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

Amendment V
No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a grand jury, except in cases arising in the land or naval forces, or in the militia, when in actual service in time of war or public danger; nor shall any person be subject for the same offense to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty or property, without due process of law; nor shall private property be taken for public use, without just compensation.

National Environmental Policy Act (NEPA)

42 U.S.C. § 4331. Congressional declaration of national environmental policy. ***

(b) In order to carry out the policy set forth in this chapter, it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may –

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

2. assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings; ***

(c) The Congress recognizes that each person should enjoy a healthful environment and that each person has a responsibility to contribute to the reservation and enhancement of the environment.

42 U.S.C. § 4332. Cooperation of agencies; reports; availability of information; recommendations; international and national coordination of efforts

The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the

policies set forth in this chapter, and (2) all agencies of the Federal Government shall -- ***

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on –

the environmental impact of the proposed action,

any adverse environmental effects which cannot be avoided should the proposal be implemented,

alternatives to the proposed action,

the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and

any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views

> of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the president, the Council on Environmental Quality and to the public as provided by section 552 of Title 5, and shall accompany the proposal through the existing agency review processes; ***

Council on Environmental Quality Regulations
40 C.F.R. Sec. 1508.27 Significantly.

"Significantly" as used in NEPA requires consideration of both context and intensity:

> (a) Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.
>
> (b) Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:
>
> > 1. Impacts that may be both beneficial and adverse. A significant effect may exist even

if the Federal agency believes that on balance the effect will be beneficial.

2. The degree to which the proposed action affects public health or safety.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

4. The degree to which the effects on the quality of the human environment are likely to be highly controversial.

5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

(2)

No. 06-175

IN THE

Supreme Court of the United States

In Re MARIA GONZALEZ, individually and as mother and legal guardian of her daughters TARA GONZALEZ (age 14) and NICOLE GONZALEZ (age 8)

Petitioner.

ON PETITION FOR WRIT OF MANDAMUS TO THE UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

BRIEF OF HEALTHY SCHOOLS NETWORK, INC. AS *AMICUS CURIAE* IN SUPPORT OF PETITIONER

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Attorney for Healthy Schools Network, Inc. as Amicus Curiae

DATE: SEPTEMBER 5, 2006

QUESTION PRESENTED ADDRESSED BY *AMICUS CURIAE*

Should the Federal Communications Commission ("FCC"), in launching a major new program that will risk biological harm to vulnerable children, be able to continue to ignore the National Environmental Policy Act ("NEPA") requirement that an environmental impact statement ("EIS") be prepared for all major governmental undertakings simply because scientific warnings of health hazards have not reached the stage of definitively establishing harm to humans?

Should the FCC be excused from performing an NEPA-mandated EIS just because a multitude of *ad hoc* licensing and site-specific reviews are available, as the so called "functional equivalent" of an EIS, which (a) impose new costs on local citizens and governments, (b) are dependant on challenges by potential victims who most often would not know of the risk, and (c) would be based on the scientifically questionable assumption that no biological harm is being caused by long term radio-frequency ("RF") radiation until the certainty of harm is definitively established?

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[1] Claire Barnett participated in the preparation of this brief.

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PRELIMINARY STATEMENT

This case raises the very significant questions of (a) whether the FCC, in launching a major new cellular telephone program, should be able to ignore both the safety of children and the NEPA requirement that an EIS be prepared for all major governmental undertakings simply because scientific warnings of health hazards have not reached the stage of definitively establishing harm to humans, and (b) whether the availability of a multitude of *ad hoc* licensing and site-specific reviews, applying standards based on the scientifically questionable assumption that no biological harm is being caused by long term radio-frequency ("RF") radiation, is the "functional equivalent" of an NEPA-mandated EIS.

DESCRIPTION AND INTEREST OF *AMICUS CURIAE*

Healthy Schools Network, Inc. ("HSN") submits this brief as *Amicus Curiae* with the written consent of all parties [3]

HSN is a national environmental 501(c)(3) not-for-profit corporation organized in 1995, and incorporated in 1998 under the laws of the State of New York. Its offices are located in Albany and Washington. D.C. HSN is dedicated to assuring every child and school employee an environmentally safe and healthy school through research, information, advocacy and coalition building. HSN's web site is www.healthyschools.org. HSN promotes the

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[3] Pursuant to Supreme Court Rule 37.6 *Amicus* states that this brief was authored in whole by undersigned counsel and his client, and that no person or entity other than the *Amicus* made a monetary contribution to the preparation and submission of this brief.

development of national, state, and local policies, programs and funds with a two-fold focus: to improve the environmental conditions of school facilities, and to promote children's environmental-'occupational' health in their "workplaces" – schools.[4]

In 2000 HSN convened the *ad hoc* Coalition of Healthier Schools to provide "the platform and the forum for school environmental health", uniting public health, environment, parent, labor and education groups and individuals around policies to prevent environmental exposures that are associated with health problems in children and adults. HSN links the coalition members through sponsoring conference calls and meetings. Participating policy groups come from areas enrolling more than ten million of the nation's 48 million public school children. Collaborating nationwide, HSN has led National Healthy Schools Day activities for the last three years, created a "*National Healthy Schools Training*

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[4] HSN has won national recognition for its Healthy Schools/Healthy Kids Clearinghouse informational services, and has a long history of helping other nonprofits and agencies develop school environmental programs sensitive to children's needs. HSN has fostered the creation of state-based policy reform organizations and scores of local groups concerned with environmental health in schools. HSN has been honored to receive in 2005 the U.S. Environmental Protection Agency **Children's Health Protection Recognition Award**. Its executive has also chaired the U. S. EPA's Office of Child Health Protection Advisory Committee's Work Group on School Environments in 2001-02 and again in 2004; co-chaired the School Policy panel for the prestigious 9th International (triennial) Indoor Air Conference in Monterey, California in July 2002; coordinated invited testimony in the U.S. Senate Environment and Public Works Committee Hearing on School Environments in October 2002; and, since 2003 has led two briefings for The White House Council on Environmental Quality.

Binder," encouraged research, and advocated for federal and state reforms.

HSN's preventive approach to designing, building, and maintaining school buildings is based on the knowledge that (a) children are more vulnerable to environmental hazards than adults, (b) they cannot protect themselves from hazards, (c) they are required to be in school, and (d) no agency is authorized to intervene when children are at risk. Authoritative scientific studies indicate that facilities with superior indoor environmental quality and good day lighting are associated with higher test scores and attendance. Applying this base, HSN promotes "high performance school" design and construction consistent with its support of the Healthy and High Performance Schools provisions of No Child Left Behind – schools designed for energy and resource conservation as well as superior environmental quality through reducing the use of polluting materials.

In 1996 HSN created the Healthy Schools/Healthy Kids Clearinghouse offering informational fact sheets, guides, and reports, phone and email assistance to parents, personnel, and to schools. Areas of health interest to HSN other than the RF radiation exposure danger discussed here are set forth in Appendix A. Web-based publications address common concerns. More extensive guides outline occupational health regulations and identify agencies in the states that are likely to have responsibilities. By providing steady advice on preventing environmental problems, HSN helps parents and the education communities become aware of environmental problems and understand how to prevent or to reduce them.[5]

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[5] As part of its program to protect children's health, HSN has promoted research and translated it into policy action. A 2004 HSN report, *The Healthy and High Performance School,* summarizes

EPA currently estimates that half of all schools have compromised indoor environments; and since schools are primarily locally funded, it is not surprising that federal reports continue to find that the poorest children have the schools in the worst condition. There clearly is an enormous unmet need to improve, not further undermine, school environments.

HSN is quite concerned that a significant threat to the health of school children and personnel is posed by RF radiation from cell towers placed on or near schools or day care centers. Two members of HSN's board are scientists with extensive experience in dealing with the potential of harm from electronic transmissions. HSN submits this brief as *amicus curiae* to advise the Court of the need for enforcement of a court-mandated EIS in this case.

THE PETITION FOR MANDAMUS SHOULD HAVE BEEN GRANTED

This case addresses a very significant potential health risk to the nation's school children for which no one is currently assuming responsibility. Because of their greater vulnerability, inability to avoid exposure, and lengthy school-day exposure, the need for an EIS evaluating the new FCC's new Advanced Wireless Services ("AWS") program is more compelling for the 54 million children in

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peer-reviewed scientific literature on school indoor environments and children's health (Boese & Shendell (2004)). The U.S. DOE Study of National Significance (2004) covered many similar studies. Another HSN data report found that poor facility conditions were associated with lower test scores and attendance and higher suspension rates (See Boese & Shaw (2005)).

public and private schools in the United States than either the adult population or the general population at large.

A. Existing Scientific Warnings of Harm From Long-Term Exposure to RF Radiation Justify Concern about the Launch by the FCC Of A New Program Without EIS Evaluation

There now exists a substantial body of published scientific research suggesting that the potential for harm from new cellular transmission technology is real. These studies justify concern that cellular band towers operating near school buildings emit RF radiation that may be harmful to the health of humans in the immediate area and cause biological harm through long term exposure.

Electromagnetic radiation is a form of energy which travels in waves and includes everything from high energy X-rays and cosmic rays through visible light to the low energy electric and magnetic fields released from power lines. Cellular telephone towers release RF radiation that is in the microwave region of the electromagnetic spectrum.

High energy electromagnetic radiation is clearly harmful, and can cause cancer and birth defects through direct damage to the genetic material in cells. There is also a substantial body of scientific evidence showing that the low energy electromagnetic fields coming from power lines and electrical appliances (at a frequency of 60 Hz in the U.S.) also pose an elevated risk of cancer to humans. While the degree of hazard from lower energy fields is still a matter of controversy, the evidence that there is an increased risk of cancer among highly exposed persons nevertheless is very strong. A report in 1999 to the U.S. Congress from the National Institute of Environmental

Health Sciences has concluded that "the epidemiologic studies demonstrate...a fairly consistent pattern of a small increased risk with increasing exposure that is somewhat weaker from chronic lymphocytic leukemia than for childhood leukemia" (National Institute (1999).[6] The report also concludes that animal studies have not resulted in cancer, but that no mechanism is known to explain the increased leukemia seen in people exposed to these electromagnetic fields.

Questions of safety increase with respect to cellular tower transmission fields as compared to those generated by electrical transmission lines. The energy in all forms of electromagnetic radiation increases as the frequency increases. The frequency, and therefore the energy, released from cellular phone towers is less than x-rays and visible light, but greater than that of power lines. Since there is a general consensus that the relative harm from electromagnetic radiation is in proportion to the energy of that radiation, one would expect cell tower RF radiation to be less harmful than x-rays, but more harmful than that coming from power lines. Unfortunately, there has been almost no careful investigation of human health effects from cellular phone frequencies, although clearly there is significant exposure to individuals who are in close proximity to cellular towers.

RF fields are basically the same as microwaves, which clearly do cause heating if the intensity is great

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[6] Introduction to the report by Dr. Kenneth Olden, then the Director of the National Institute of Environmental Health Sciences and currently a member of the Board of Directors of the HSN who has participated in the preparation of this brief.

Because of the length of citations to scientific reports in this brief, to facilitate reading, all references to scientific reports are to shortened versions set forth in the Table of Cited Authorities.

enough. The proposed ultra-high frequency RF waves involved in this case will have more energy, and thus be more potent in potentially causing harmful effects, than the RF fields in current usage.

Present international standards for exposure to RF fields, including the FCC's present RF radiation standards the application of which it offers to excuse its failure to conduct an EIS study, are based on limited information and on the highly questionable assumption that there are no non-thermal effects of RF radiation, thus the present scientific debate is over whether there are "non-thermal" effects that are not mediated by tissue heating. The answer is that some, but not all studies of humans indicate that non-thermal RF fields do cause harm to humans. We will now summarize the available information.

The strongest evidence of adverse health effects indicates concern for causation of cancer. Szmigielski (1996) reported cancer morbidity in Polish military personnel, and found that personnel exposed to RF/microwave radiation showed a greater than two-fold risk of any cancer as compared to unexposed personnel. The relations were strongest for hematopoetic cancers, which were elevated between 5.8 and 13.9 fold. Grayson (1996) reported a significant 1.29 fold elevation in brain tumors in US Air Force personnel exposed to RF/microwave radiation. Dolk et al. (1997) reported a 1.3 fold elevation in incidence of leukemia in individuals living near an FM radio transmitter in England. Michelozzi et al. (2002) reported a significant elevation in adult and childhood leukemia in residents living near a high-powered radio station in Rome. Park et al. (2004) investigated cancer rates in Korea in individuals living near AM radio broadcasting towers, and reported significant elevations in leukemia, especially in the young.

Hardell et al. (2004) found that individuals using analog cell phones had a greater than eight-fold increased risk of developing brain tumors, while with cordless phone usage the increased risk was more than four-fold, and Lonn et al. (2004) also found an increased risk of acoustic neuroma (a form of brain cancer) among persons in Sweden who used a cell phone for 10 or more years.[7]

Kundi et al. (2004) summarizes the results of nine different human epidemiological studies of cell phone users from the U.S. and Europe. While elevated risks of brain cancer, leukemia or melanoma were reported in these studies, all have some limitations. Also, the period of cell phone use was short, whereas cancer often takes a long time to develop[8]. The authors of the Kundi study conclude that while the evidence to date is not sufficient to prove that cell phone use causes cancer, there is sufficient concern that more research be done. A very

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[7] There are a number of reports of non-thermal effects of RF transmissions on human populations. Robinette et al. (1988) investigated morbidity and mortality of US navy personnel exposed to radar, and Lilienfeld et al. (1978) looked at similar indicators in occupants of the US Embassy building in Moscow, which was exposed to RF radiation. Neither reported any change in morbidity or mortality. Thus not all studies have found elevated rates of cancer, including leukemia and brain cancer in tumors, upon exposure (see Morgan et al. (2000), as discussed further below. However, Milham (1982) and Coleman et al. (1983) have reported elevations in leukemia incidence among ham radio operators and electricians. There are other studies that also report positive associations between RF exposure and cancer (Milham (1985; 1988a and 1988b); Szmigielski et al. (1998), all referenced in Elder (1994)). But all of these studies lack good dosimetry, i.e., measurement of the intensity of RF fields, with regard to levels of exposure.

[8] It was not always possible to quantify the exposure well, and since exposure was dependent upon subjects remembering their degree of cell phone use, this may have led at times to inaccurate information.

similar conclusion was made in another recent review by ICNIRP et al. (2004), which points out that the human studies are not all consistent, but that there are so many deficiencies in the studies to date that one cannot rule out an association between exposure and cancer.

A recent research report from Australia (Repacholi et al. 1997), made in the laboratory of a researcher known to be skeptical of RF danger, shows that digital mobile phone radiation boosts cancer rates in mice is particularly important in this regard. It provides much additional support for concern about exposure to these forms of electromagnetic radiation.

Aside from cancer, other biological effects have also been observed by researchers. They include increased spontaneous abortion, shifts in red and white blood cell counts, increased mutations in lymphocytes (see Goldsmith (1997)), direct damage to nerve cells from microwaves from GSM mobile phones (Salford et al. (2003)), altered diurnal rhythms of blood pressure and heart rate (Szmigielski et al.(1998)), changes in brain wave activity (Eulitz et al. (1998)), and altered performance of rats in learning tasks (Wang & Lai (2000)).

The FCC's implication below that only high-energy ultraviolet, x-ray or nuclear radiation have sufficient energy to cause biological injury because there is "no scientific consensus on the issue" (FCC Brief below, p. 4) is inconsistent with the U. S. GAO Report (2001), Kundi et al. (2004) ICNIRP (2004), Kheifert (2005) and Owen (2000). (See Appendix B for relevant statements from these studies).

Salford et al. (1994) reported that low power RF fields, below that which caused thermal effects, increase leakage of protein from the blood-brain barrier, and in

2003 found that this resulted in nerve cell damage in the brain. Tattersall et al. (2001) found that RF field applications below the level which causes heating resulted in changes in the electrical activity of brain slices, which suggests that such fields can alter nervous system function. Huber et al. (2000) showed that human exposure to digital radiotelephone handsets affects brain physiology in young healthy male subjects, modifying their EEG during subsequent sleep.

As indicated, the studies suggesting cancer and other health risks do not stand alone.[9] But the available evidence certainly does NOT permit anyone to conclude that cell transmissions are not harmful, much less that long exposures to closely transmitted ultra-high frequency cellular transmissions are not harmful.

Under these circumstances where the science is uncertain with regard to human health risk it is difficult to make decisions. Given the current state of research, at best one can reasonably conclude that at present there is neither adequate evidence to conclude that exposure to RF radiation is "safe," or that it is hazardous.[10] Even though

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[9] Some studies suggesting that there are no links to cancer and other biological harm are described above. There are also several reviews that express skepticism that RF exposures are linked to cancer and other biological harm (Hermann & Hossmann (1997); Moulder et al. (1999); and Elwood (2003)). There are several reports that have not found elevated rates of death (Rothman et al. 1996) or incidence of brain cancers (Inskip et al. 2001); Christensen et al. (2005) among cell phone users. None of the studies reported health effects focused on cell phone tower transmissions.

[10] But even this uncertainty and need for caution arose in the context of the older transmissions. The FCC is now in the process of launching a totally new spectrum of ultra-high frequency magnetic field, slightly more powerful, and therefore potentially more dangerous, bringing with it new uncertainty. The new program

the evidence to date does not allow one to conclude that RF exposure is definitely hazardous to human health, it certainly does suggest the conclusion that there is reason to be cautious since, if anything, the majority of the studies are suggestive of an association between exposure and cancer.

B. The Potential for RF Radiation Harm is Greater for Children and for Schools

When a cellular transmission is beamed through, on, or near a school, the long-term exposure to RF radiation is significantly greater because the transmission is directed at a concentrated portion of the most vulnerable part of our population each school day – school children. We also know from existing studies that the risk of harm from RF exposure increases as exposure increases (Dolk et al. 1997; Michelozzi et al. 2002). This means that the risk of long term RF exposure from transmissions located near schools is multplied because schools are gathering places for the most vulnerable part of the population for long periods of time.

As cellular coverage increases in each community, causing cellular transmissions to become sited closer to congested areas, the possibility that the cellular towers will be located, as in this case, so that they aim their

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raises still another level of questions, and there are plans for transmissions at even higher frequencies in the future. Studies discussed above signal the need for evaluations of the potential harmful effects of the new high frequency RF radiation. Also, the fact that these megahertz bands are currently being used by licensees transmitting lower frequencies (as the FCC argued below) does not reduce the risk of increased harm from higher frequencies when that higher frequency use begins.

transmissions from the top, through, and over schools also increases. Unlike with a TV or radio tower where the electromagnetic radiation goes in all directions (360°), the beam from a cell phone tower is usually directed at the horizon. This becomes of particular concern when an occupied space is in the direct path of the cone-shaped cell tower transmission pathway. In general, the closer one is to the tower, the stronger the radiation, especially if in the direct line with the tower.

Some schools are at more risk than others due to fiscal constraints and the attractiveness of developing outside income. Schools are more locally funded than state funded. There is virtually no federal funding for school construction and, compared to all local sources, comparatively little for educational programs. School systems needing more resources try to earn money many ways, for example selling ad space, selling sweets, or even leasing cell tower space. Thus, the lower income neighborhoods with lower-income/higher risk students and with resource-poor schools are more likely than schools serving high income populations to agree to lease rooftop space to cell towers.

Children are particularly susceptible to pollutants and therefore likely to be much more vulnerable to the effects of cell phone frequencies. See generally, National Research Council (1993) recognizing that fetuses, children, and all developing organisms are often more susceptible to environmental agents than adults, and that public health policy often fails to reflect this unique susceptibility. The study of RF transmission risk by ICNIRP et al. (2004) emphasizes that none of the studies to date have focused on exposure of children.

This potential for harm to children is exacerbated by the long term exposure that results from young children

spending significant periods of time in school. Schools are a gathering place for children for between six and eight hours a day, five days a week, and some children may be in school for breakfast programs through after school activities, a far longer 'work' week. While this is still not as much as the home life of each child, this is substantial exposure nevertheless, and it is concentrated among many children. And it is not as if the resulting risk of harm can be avoided. Children are required by law to attend school, and need to be educated. Even if the risks were generally known, which they are not, most children have no alternative but to attend the school to which they are assigned and therefore endure whatever risks are present in that environment. Schools are generally not required to inform parents of such risks.

C. Precaution Dictates the Need for an EIS.

Some forms of environmental harm exist in schools solely because of negligence, short sightedness, lack of funds for planning, siting, and maintaining schools, or the indirect result of greed in school construction, and cannot therefore be anticipated. But there are also many other forms of environmental harm that can be anticipated and thus avoided. Awareness of this possibility led HSN in the mid-90's to urge schools to adopt a policy of prevention to promote healthy school environments.

HSN is not alone in adopting preventive policies to improve school facilities. Other nongovernmental organizations and governmental bodies began taking systematic actions to improve school environments in the

late 1990's.[11] More recently, the powerful "Precautionary Principle" is being applied to a full range of chemical/biological issues. [12]

The Precautionary Principle, once the conceptual cornerstone of public health, is reemerging as a central concept in public health today.[13] The Principle is the idea that when there is credible evidence of adverse effects, precautionary action should be taken, even when some cause and effect relationships are not fully understood or

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[11] Specifically regarding electromagnetic fields ("EMF's"), HSN's adoption of preventive actions was prompted by the adoption of the New York State Board of Regents in 1995 of key guiding principles and recommendations of the Regents' Advisory Committee on School Environmental Quality (New York Regents Report 1994), stating that children were more vulnerable to hazards, and stating that schools should serve as role models for environmentally responsible behavior. In 1995, the Regents also adopted a policy of "prudent avoidance" of EMF's (New York Regents Report 1994, New York Regents Meeting (1995)). See text in Appendix C. Many other states adopting new policies to improve school indoor air quality were reported by Bernstein (2002). Another study by Bernstein also reported on how state and local agencies were promoting "high performance school design" (Bernstein 2003).

[12] This concept is imbedded in Principle 15 of the United Nations Environment Programme conference in Rio de Janeiro in 1992, to which the U.S. is a signatory (See U.N. Rio Declaration (1992) and Appendix D), and reflected as a policy (#200011) of the American Public Health Association for preventing harm to children (APHA Policy Statement, see Appendix E).

[13] The European Union adopted the Principle in the 1992 treaty that created the union and the policy was put forward throughout the EU in 2000. See http://ec.europa.eu/dgs/health_consumer/library/pub/pub07_en.pdf. In 2003, the European Commission hosted a conference on the application of the Precautionary Principle to EMF fields. See http://ec.europa.eu/health/ph_determiants/environment/EMF/conf_febvruary_2003_en.htm.

established. In situations where there is some evidence of a human health hazard, but not enough to be characterized as definitive proof, it is deemed wise to take preventive action to avoid or reduce exposures.

The Principle is most appropriate for application precisely in those areas, like this case, where proof that causal harm exists as a potential threat, but is not available as a definitive result[14]. Implementation of the Precautionary Principle is especially important when children are involved because of the greater vulnerability of children to the effects of toxic exposures as their bodies are developing (See subsection B, supra).

As indicated in subsection A, supra, the new AWS cell-tower transmission program is a classic situation of uncertainty and risk calling for precaution. Under this clear need for evaluation of risk the wisest approach for both government and individuals is to take the first step in implementing precaution by conducting an EIS study as required by law. Human exposure should be reduced by applying prudent avoidance until the EIS process is completed, and thereafter steps should be taken to avoid risk based on the conclusions of the evaluation.

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[14] See generally, Raffensperger & Tickner (1999) and APHA Policy Statement: "recognizing that proof of cause and effect relationships is often difficult to establish because of non-specificity of health effects, long latent periods, subtle changes in function that are difficult to detect without resource-intensive studies, and complex interactions of variables that contribute to adverse health effects." . Both Raffensberger & Tickner (1999) and Jackson (1993) are sources for APHA Policy: "recognizing that some uncertainty is irresolvable by more data collection; that some residual uncertainty is actually the result of indeterminacy due to multiple factors interacting in complex systems or due to ignorance about what questions to ask or what effects to look for".

It is unrealistic to excuse application of the Precautionary Principle on the argument that application of the Principle for health safety reasons conflicts with the FCC's mandate to promote telecommunication services to the public for industry by expanding the telecommunications industry, cf. *Cellular Phone Taskforce v. FCC*, 205 F. 3d 82, 91-92 (2000), since the FCC cannot even properly assess the balance between serving the public's health (which may have to bear an incalculable cost to children) and serving the public through industry without an EIS evaluation. Unfortunately the position industry being taken by the FCC in this litigation with respect to its new AWS program is quite the opposite of precaution. Despite existing suggestions of potential biological harm, the FCC intransigently relies, without the benefit of an EIS, on its judgment (which we believe to be unscientifically sound) that its safety standards are adequate when it could instead be taking steps to avoid harm. The FCC's position that it perceives no need for action by way of avoidance or study in the absence of definitive proof of harm amounts to insisting on a body count first approach. The health and learning of the nation's children does not have the luxury of proceeding by such an incalculably costly and tough standard

D. An EIS Is Necessary Because There Is No Good Alternative

One common factor that HSN repeatedly finds accompanying discovery of harmful exposures in schools is that no agency is charged with protecting children's health, or watching out for dangers in the school. HSN has documented in two recent national collaborative

reports[15] that in state after state no agency is charged with protecting children's environmental health, or authorized to intervene when hazards affect school children. There is also no systemic national or state surveillance of school environments or of child health at school.[16]

Few if any educational leaders, and those charged with organizing and structuring educational systems, have any training in facility management. Fewer still would have information about children's enhanced vulnerability to environmental hazards (see www.epa.gov/children). Based on past experience it can be assumed that school administrators and the governmental agencies that supervise and administrate school systems are going to be more focused on educational systems than on school environmental hazards.

Potential harm from cell transmission is no exception to this pattern of safety oversight. Children, the most numerous potential victims, cannot be expected to provide safety oversight for themselves, nor to self-advocate. If the FCC does not conduct an EIS evaluating the risks of the new RF radiation it is about to unleash, it can reasonably be expected that no other agency or local school administrator or parent will step in to produce or to

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[15] See Barnett & Paulson (2005) and Healthy Schools Network, *Lessons Learned* (2006).

[16] Following on federal reports of poor indoor air quality and other environmental risks at school, one federal agency, the U.S. Environmental Protection Agency, significantly expanded its voluntary guidance documents on schools (see www.epa.gov/schools). The federal Executive Order on Risks to Children's Health which had helped to coordinate federal efforts to protect children has lapsed in 2005 (U.S. Executive Order #13045).

finance an EIS that would generate protection. Hence the significance of a Court-mandated EIS in this case.[17]

As the FCC would have it, Court review should be limited to individual license proceedings or proceedings after the bidding occurs, and then only with respect to specific sitings by winning licensees. But any such review would be entirely *ad hoc*, dependant on the sophistication and watchfulness of the multitude of potential victims but too costly for them anyway, and would permit potential harm to proceed in the many instances where no site-specific review is focusing on potential harm. Even *ad hoc* victim watchfulness cannot be effective where (as in this case) cellular towers are camouflaged, and hidden by false representations as to their function (also as in this case), and the victims are primarily children. And even the piecemeal reviews ostensibly available would be without a global EIS. For these reasons there simply is no adequate alternative remedy. The conclusion of the Second Circuit in 2000 notwithstanding, HSN submits that the availability of a multiplicity of *ad hoc* reviews is simply not the "functional equivalent" of EIS evaluation. Cf. *Cellular Phone Taskforce v. FCC*, 205 F. 3d 82, 96 (2000) and *EMR Network v. FCC*, 391 F. 3d 269, 274-75 (D. C. Cir. 2004). Systematic problems demand systematic evaluations to lead to systematic solutions. Where the potential for environmental harm is both systematic and can also be anticipated, the solution should be systematic and anticipatory, not an *ad hoc*, or worse, a body-count first response.

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[17] By its reliance on safety standards ignoring current scientific knowledge suggesting concern about the uncertainty of RF radiation risk, the FCC is showing itself to be an inadequate protector for children and for our schools.

There is no satisfactory alternative to a Court-mandated EIS financed by public funds. The few watchful victims and parents that we hope are out there who might otherwise engage in *ad hoc* litigation cannot afford it themselves. However, requiring the FCC to prepare an EIS as required by law would go a long way in reducing existing concern and in facilitating formulation and implementation of a safe wireless licensing policy. If there is potential harm, but it can be avoided by caution, study, and prudent avoidance rather than wait until provable harm is first detected. Otherwise when and if that detection finally occurs much of the damage to a generation of children may already have been inflicted. An EIS performed by the FCC can be expected to help narrow the gap that exits in current private and public research. If it were to be determined through such study that a harm to be avoided does exist, steps will inevitably follow to achieve avoidance. If it should be determined that a risk does not exist, that determination will by itself go a long way in alleviating the concern that currently exists in the school environment. Better safe than sorry, as we have all been told growing up.

E. The Need for an EIS Is a National Health Issue so Significant It Should Not Be Avoided by Unrealistic Procedural Obstacles.

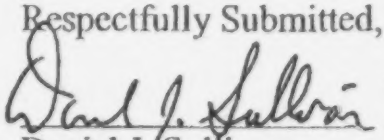
The Court of Appeals should not have denied this application based on what are essentially unrealistic procedural grounds. The new licenses program of new and untested ultra-high frequency licenses is certainly the commission "of resources in a federally significant action", and a "major federal action" of the proportions acknowledged by the Court of Appeals as giving rise to

the need for NEPA compliance. See *Cellular Phone Taskforce v. FCC*, 205 F. 3d 82, 87 (2000).[18] Particularly for children, the launch of this program is also a national health issue demanding relief by the exercise of the Court's discretionary power.

CONCLUSION

Healthy Schools Network, Inc. urges this Court to issue a writ of mandamus to the Court of Appeals for the Second Circuit directing the FCC to prepare and file an EIS for its Advanced Wireless Services program.

Respectfully Submitted,



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September 5, 2006

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[18] In its brief below the FCC characterized the licensing of the new ultra-sound spectrum r as an "important FCC program," and characterized the prior spectra as "unrelated." The staggering proportions of the licensing fee income expected ($1,167,037,500 just for "Upfront Payments" for the 1122 new licenses (Pet. Br. 13)), and the estimated value of the new spectrum ($15 billion by the Congressional Budget Office and approximately $34 billion by a Committee of the House of Representatives (FCC Brief below, p. 22)) also reflects the tremendous magnitude of this new AWS project.

Appendix A

Areas of health interest to HSN other than the RF radiation exposure danger discussed in this brief include:

(a) Indoor air problems, such as moisture damage to buildings and furnishings as a precursor to mold infestations ;
(b) Surface concentrations of microbials, such as bacteria and fungi that can affect the health of occupants of buildings;
(c) Biological agents in air and dust (bacteria, fungi, allergens such as dust mites, pet dander);
(d) Toxic and odorous volatile organic compounds, including formaldehyde;
(e) Direct measures and indicators (carbon dioxide) of ventilation;
(f) Temperature and relative humidity;
(g) Persistent organic pollutants (polychlorinated biphenyls, phthalates);
(h) Specific metals (arsenic, lead, mercury);
(i) Asbestos (and related lung cancer and mesothelioma);
(j) Radon gas;
(k) Lighting;
(l) Noise;
(m) Drinking water and sanitation;
(n) Disability access;
(o) High Performance School design including siting of facilities;
(p) Chemical use and storage;
(q) Environmentally Preferable Purchasing, and
(r) Environmental public health services for children.

Appendix B

The specific language on point from the citations at page 9, are:

"The consensus of FDA, the World Health Organization, and other major health agencies is that the research to date does not show radiofrequency energy emitted from mobile phones to have adverse health effects but there is not yet enough information to conclude that they pose no risk.....The findings of some studies have raised questions about possible cancer and non cancer effects that require further investigation."(U.S. GAO Report (2001)).

"All studies approaching reasonable latencies found an increased cancer risk associated with mobile phone use." (Kundi et al.(2004))

"No study populations to date have included children, yet children are increasingly heavy users of mobile phones and they are potentially highly susceptible to harmful effects." (ICNIRP (2004)).

"It [this review] includes an assessment of the potential susceptibility of children to EMFs and concludes with a recommendation for additional research and the development of precautionary policies in the face of scientific uncertainty." (Kheiferts et al. (2005))

"There is currently insufficient scientific basis for concluding whether wireless communication technologies pose any heath risk. A significant research effort, involving both large, well-planned animal experiments and epidemiologic studies of exposed populations, is needed to support risk assessment of these devices." (Owen (2000)).

Appendix C

Policy 7 of the New York State Board of Regents Advisory Committee on Environmental Quality of Schools Report of the New York State Board of Regents, The University of the State of New York, The State Education Department (1994), adopted 1995;

Policy 7

"Encourage schools to practice prudent avoidance by taking available no-cost and low-cost measures to reduce the exposure of students and school personnel to electromagnetic fields as follow:

7.1.1 The state Education Department should work with appropriate State agencies and recognized outside-authorities to provide updated and current information about electromagnetic fields in the school environment to the school community.

7.1.2 Electromagnetic and prudent avoidance measures should be considered in the siting, design, construction, and furnishing of new schools. This consideration should include all sources of electromagnetic field exposure in and around the proposed structure.

7.1.3 Electromagnetic field exposure and available prudent avoidance measures should be considered in determining space utilization in existing facilities and purchase of new equipment for these facilities.

Appendix D

Principle 15 of the United Nations Rio Declaration (1992):

> "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainly shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation"

Appendix E

Policy Statement #200011, American Public Health Association (APHA), contained in American Journal of Public Health, Vol. 91, No. 3 at pp. 20-21.

200011: The Precautionary Principle and Children's Health

The American Public Health Association, Recognizing that, for centuries, the cornerstone of public health policy and practice has been the prevention of injury and disease; and

Recognizing that the US has signed the Rio Declaration on Environment and Development which states;

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation, a statement known as the Precautionary Principal; (1) and

Recognizing that the American Public Health Association has previously encouraged the implementation of the Precautionary Principle with regard to workplace chemical exposure prevention policies; (2) and

Recognizing that current environmental regulations are primarily aimed at controlling pollution rather than using

primary preventive measures to avoid the use, production, or release of toxic materials; (3) and

Recognizing that development of enterprises, projects, technologies, products, and substances, that may adversely affect public health proceeds through initiatives that may or may not have considered a range of safer alternatives; (4) and

Recognizing that many of these enterprises, projects, technologies, products, and substances are considered safe until proven harmful; and

Recognizing that public health decisions must often be made in the absence of scientific certainty, or in the absence of perfect information; and

Recognizing that some industries engaged in the production, release, or distribution of potentially hazardous products and processes use their influence to delay preventive action, arguing that the immediate expense of redesign to achieve pollution prevention is unwarranted, lacking scientific certainty about harmful health effects; (5) and

Recognizing that fetuses, children, and all developing organisms are often more susceptible to environmental contaminants than adults, and that agency policies and decisions often fail to reflect this unique susceptibility; (6) and

Recognizing that proof of cause and effect relationships is often difficult to establish because of non-specificity of health effects, long latent periods, subtle changes in

function that are difficult to detect without resource-intensive studies, and complex interactions of variables that contribute to adverse health effects; (7) and

Recognizing that some lack of scientific certainty is irresolvable by more data collection; that some residual lack of scientific certainty is actually the result of indeterminacy due to multiple factors interacting in complex systems or due to ignorance about what questions to ask or what effects to look for; (8) and

Declaring that children and other sensitive populations are, therefore, in particular need of protection from environmentally related hazards; and

Recognizing that Presidential Executive Order #13045 requires that all federal agencies, when developing policies, must explicitly consider their impacts on children, therefore,

• Reaffirms its explicit endorsement of the Precautionary Principle as a cornerstone of preventive public health policy and practice, both in the U.S. and throughout the world;

• Encourages governments at all levels, the private sector, and health professionals to promote and abide by this principle in order to protect the health and well-being of all developing children. Thus, APHA calls for explicit inclusion of the precautionary approach in all federal, state, and local legislation, rules, or policies intended to protect children or that may impact the health of children;

• Urges that whenever an enterprise, project, technology, product, or substance is proposed for initiation, manufacture, or use or continued manufacture or use the goal of public health advocates should be to reduce or eliminate the creation of conditions that may adversely impact reproductive health, infants, or children;

• Advocates significant increases in pollution prevention efforts through clean production, assessment of safer alternatives, energy efficiency, waste minimization, safer waste disposal methods, and reduced consumption as a general means to protect children's health and development, rather than relying on risk management of individual hazards;

• Encourages explicit consideration of the kinds and magnitude of harm to reproductive health, infants, or children that may result from an activity and its alternatives;

• Encourages explicit consideration of the kinds and magnitude of uncertainties inherent in assessing potential harm to reproductive health, infants, or children from an activity and its alternatives;

• Encourages precautionary action to prevent potential harm to reproductive health, infants, and children, even if some cause and effect relationships have not been established with scientific certainty;

• Urges scientists to engage in analysis and studies to develop implementation strategies using the Precautionary Principle that are based on sound science.

• Enunciates the urgent need for improved research methods to understand better the additive, cumulative, and synergistic effects of multiple stressors on children's development and health; and.

• Urges the United States to honor and explicitly refer to the Precautionary Principle during negotiations of international agreements, while working to establish the Precautionary Principle as a guiding principle of environmental and health-related international law.